## U.S. AMLR Program and National Science Foundation

# 2012-2013 Weekly Field Reports Copacabana, King George Island

Volume 2 October 24, 2012

### **Science Report:**

1. Penguins: The first Adélie penguin eggs were seen on Thursday, 25 October, a few days later than last year. The delay in laying is probably due to the snow in the colonies and the unusually cold temperatures that have prevented the melting out of the nest areas. Some areas in the Adélie penguin colony have up to a foot of snow, so the penguins are laying eggs in snow-bowl nests, with a few pebbles scattered on top. As they incubate, the snow will melt down, often creating deep holes in the snow and the potential for melt-water to collect at the bottom and freezing the eggs. The eggs can tolerate some cooling but will not survive if they are in water too long, as the adults cannot warm them sufficiently. Banding of the breeding adult penguins in our study sites started this week. We are focusing on banding female Adélie penguins that have laid an egg, as they will leave for their first foraging trip to sea soon after laying the second egg and we want to make sure to get them before they go.

The gentoo penguins started laying earlier than the Adélie penguins, with a few full clutches found on Wednesday, 24 October, but only in those colonies with less snow and more pebbles available. Clutch initiation for gentoo penguins is about the same timing as last year.

- 2. Skuas: More skuas are arriving daily, but only single birds, largely males, have been seen on territories so far, with no mated pairs. Most of these early arriving skuas are brown skuas, that defend penguin feeding territories, although we have seen a few south polar skuas. Many of the brown skuas that we outfitted with GLS (geolocator) tags attached to their leg bands last year, have returned with the tags intact, but we will delay trying to recover them until they are well attached to their territories and have a mate with them. These tagged birds will hopefully give us an indication of where the brown skuas spent the winter. On our visit to the Polish base (Arctowski) this past weekend, we also saw many brown skuas occupying territories in that area. We plan to begin our regular skua checks at Point Thomas (the area near Arctowski) next week during our visit.
- 3. Sheathbills/Giant Petrels: A few sheathbills have been seen regularly foraging among the penguins, mostly in the beach areas. No sign of our one breeding pair, including the banded male known as "Rasta" (due to his red, green, and yellow colored leg bands), has been seen yet.

The giant petrels are already occupying nests in the colonies around Copa and Point Thomas, including the many new areas at Copa colonized in recent years. These birds are quite skittish and easily disturbed, as they are courting and will begin egg laying in 1-2 weeks. We don't go near them until early-mid December, when we do a nest census about halfway through the incubation stage of their breeding cycle.



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4. Seals: One leopard seal kill was observed last week, but we have seen several other individuals on ice floes and patrolling the colony beaches, so they are in the area. Saturday, 27 October, was our first complete seal census for the beaches from Sphinx (south of Copa) to Point Thomas (on the far side of Arctowski). We counted two crabeater seals, several elephant seals, and one leopard seal on an ice floe near shore.

#### **Camp Activities:**

Snow has been cleared off the decks regularly, particularly after the snowstorms we've had this week. Some of the gutters for our water-collection system have been put up, but mostly to keep ice from forming on the decks from the run-off, since the water barrels are still frozen. We still have to melt snow for our water supply.

#### Weekly Weather:

It has been below freezing, most of the week, with average temperatures in the 20's. The one day above freezing helped to clear much of the decks of ice and packed snow, and was a nice respite from the cold. There have been three snowstorms from the SSE this week, as well, replacing what little snow was lost due to melting or sublimation.

The 2012-12 Copa Field Team:

Sue Trivelpiece, Co-PI Matt Henschen, Field Team Leader Brette Soucie Caitlyn Bishop Ana Bertoldi

